



BROOKHAVEN BULLETIN

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NRAO Astronomers Say Quasars Are Far, Far, Away!

Astronomers at the National Radio Astronomy Observatory in Green Bank, West Virginia have discovered compelling evidence in favor of the hypothesis that many quasars are located at or near the edge of the observable universe instead of being relatively nearby.

This new scientific discovery by Drs. Robert L. Brown and Morton S. Roberts came about with the detection of a redshifted 21-centimeter line of neutral hydrogen in the radio frequency spectrum of the quasi-stellar object 3C 286. This observation represents the radio spectral line with the largest redshift yet discovered.

Quasistellar objects, or quasars as they have come to be called, are highly energetic sources of intense radio and optical radiation, the nature of which has provided one of the principal controversies of modern astronomy.

Discovered in 1960, quasars are enigmatic in a number of ways. They appear only as faint star-like images on photographic plates taken with large telescopes, yet they are enormously energetic radio sources. Moreover, the distance inferred for these objects from the shift of their optical spectral lines due to the expansion of the universe (a redshift because lines from receding objects are shifted to longer wavelengths) places them at cosmologically enormous distances.

This interpretation has been disputed by a number of astronomers who believe the quasars may be relatively nearby because the redshift is due to a change in the laws of physics in these objects and hence that a quasar's redshift cannot be used to infer its distance.

In attempting to resolve this controversy, Brown and Roberts began tuning through the radio frequency spectra of the quasar 3C 286 for evidence of radio absorption lines caused by neutral hydrogen in an unrelated object that may happen to lie in the line of sight between the earth and the quasar. If a radio absorption line were found, it would indicate that cooler gas, perhaps in an intervening galaxy, was somewhere along the line of sight and its redshift would establish the distance of the intervening source. The distance of that source would then indicate a minimum distance for the quasar.

The search was conducted with the 300-foot radio telescope at Green Bank. Brown and Roberts were searching for the dominant radio frequency line of neutral hydrogen which occurs in the laboratory at a wavelength of 21.1 centimeters. A radio absorption line was indeed detected in 3C 286, at a wavelength of 37.5 centimeters, indicating a recession speed for the gas of over 100,000 miles per second, nearly seven-tenths the velocity of light.

The most reasonable interpretation for this discovery, according to Brown and Roberts, is that the hydrogen absorption line occurs in a cloud of gas lying in a normal galaxy somewhere along the line-of-sight to the quasar. Since the gas in the galaxy is undisturbed by highly energetic phenomena characteristic of quasars, its redshift may be entirely due to the expansion of the universe.

Finally, since this intervening galactic gas is absorbing the radio waves emitted by the quasar 3C 286, the quasar itself must be even more distant and hence it must have an even larger redshift than the galaxy. In this way Brown and Roberts conclude that at least 80 percent of the redshift of 3C 286 is due to the expansion of the universe and that, as a result, quasars are in fact one of the most distant classes of objects in the universe.

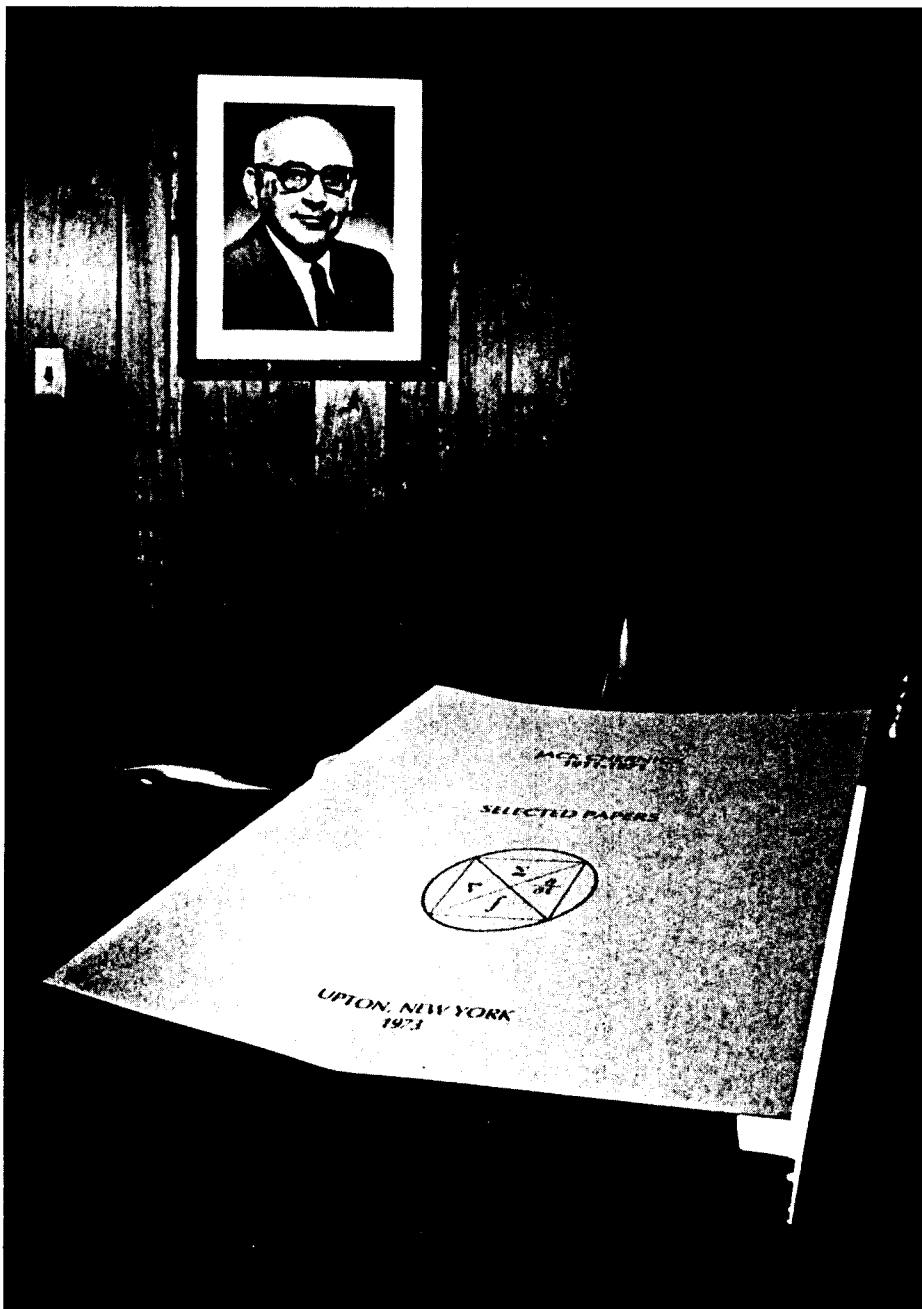
The National Radio Astronomy Observatory, with facilities in Green Bank, West Virginia, Charlottesville, Virginia, and at Kitt Peak, Arizona, was established in 1956 by Associated Universities, Inc. for the National Science Foundation. AUI also operates Brookhaven National Laboratory for U.S. Atomic Energy Commission.

AEC Commissioner Visits



On Friday, August 10, Commissioner William O. Doub, who has been a member of the Atomic Energy Commission since 1971, visited the Laboratory. He was accompanied by his Technical Assistant, Dr. Thomas E. Murley, and Mr. John F. O'Leary, Director of the Directorate of Licensing. After a short talk with Laboratory Director George Vineyard, the party made a quick tour of the site with a stop at the AGS. Then they met with Dr. Vineyard, Warren Winsche, and members of the Department of Applied Science for detailed discussions of reactor safety and technical support work being done for the Directorate of Regulation. Short talks on various aspects of the work were given by W. Winsche, M. Levine, R. Parsick, and W. Higinbotham. Following lunch they had a tour of selected facilities of DAS, particularly the work on the superconducting power transmission line and on use of metal hydrides for storage of hydrogen to be used as a fuel. Shown leaving the AGS are: Laboratory Director George Vineyard, Dr. Thomas Murley (rear), Commissioner Doub, Associate Director Vincent O'Leary (rear) and Associate Director R.R. Rau.

Memorial To Chernick



A corner of the new Jack Chernick Library in Building 130. The memorial room was created by the Department of Applied Science in honor of the late scientist, a distinguished member of the Brookhaven staff. The library's first volume (above) is a selection of Jack's published papers. (See story inside).

Paul Craig Appointed Deputy Director of Energy Policy Office

Dr. H. Guyford Stever, Director of the National Science Foundation, today announced the establishment of the NSF Office of Energy R&D Policy (OEP), and the appointments of Dr. Paul F. Donovan as Director and Dr. Paul P. Craig as Deputy Director of the new Office.

The OEP will provide to the Director, in support of his role as Science Advisor under the President's Reorganization Plan No. 1 of 1973, an independent source of advice and analysis of energy R&D and other energy-related programs for use by the Executive Office of the President - in particular, the new Energy Policy Office and the Office of Management and Budget.

Dr. Stever said, "I am very pleased to announce the establishment of the NSF Office of Energy R&D Policy and the appointments of Dr. Donovan and Dr. Craig. The area of energy R&D is a most important one for the Nation.

The OEP will assemble and mobilize the wide range of information and advice in energy-related matters that I will need in order to effectively discharge my responsibilities as Science Advisor. The expertise and experience of Dr. Donovan, Dr. Craig, and the OEP staff will be extremely valuable in this regard."



Paul Craig

Dr. Donovan, presently Chairman of the NSF Energy R&D Task Force, came to the Foundation in 1967 from the Bell Telephone Laboratories, where he initiated and developed a major and continuing research program in nuclear science and related technology. Dr. Donovan held adjunct appointments at Rutgers University, where he directed Ph.D. thesis research in nuclear physics, and at Brookhaven National Laboratory, where he initiated and conducted a variety of joint Bell Laboratories-Brookhaven research programs.

Dr. Craig's previous position was as Program Manager for Energy Research and Technology in the Division of Advanced Technology Applications of RANN. Dr. Craig came to the NSF in 1971 from Brookhaven National Laboratory, where he was Physicist and Cryogenics Group Leader. While at Brookhaven, Dr. Craig was awarded a Guggenheim Fellowship for academic year 1965-66. He was also Adjunct Associate Professor of Physics at the State University of New York at Stony Brook. Prior to his arrival at Brookhaven in 1962, he was a Staff Member of the Los Alamos Scientific Laboratory (1959-62).

During 1971 and 1972, Dr. Craig was Staff Associate in the NSF Physics Section. In 1972 Dr. Craig joined the Division of Advanced Technology Applications as a Program Manager in the Energy Research and Technology Program, with his principle responsibilities in the area of energy systems research. He is a member of the staff of the NSF Energy R&D Task Force.

Dr. Craig received a B.S. degree from Haverford College and a Ph.D. in physics from the California Institute of Technology. He is a Fellow of the American Physical Society, and the author of about 70 publications in a variety of technical fields.

Memorial Library Dedicated To Chernick



Mrs. Norma Chernick examines the first copy of a volume of her husband's selected papers published by the Jack Chernick Memorial Fund. With Mrs. Chernick at the dedication of the Jack Chernick Library in Building 130 are: (L to R) Mel Levine, Chairman of the memorial fund; Irene Chernick, Jack's daughter; Warren Winsche, Chairman of the Department of Applied Science; and Dr. George Vineyard, Director of Brookhaven National Laboratory.

On Tuesday afternoon a group of friends and former associates of the late Jack Chernick gathered in the Reactor Theory building for a ceremony honoring Jack's memory. Mel Levine, Chairman of the Jack Chernick Memorial Fund, presented to Norma Chernick the first copy of a memorial book consisting of Jack's important scientific papers.

In his presentation speech to Mrs. Chernick, Levine said, "Soon many people and many institutions are going to get copies of this book. We are going to send them to Jack's friends and associates and to universities and laboratories all over the United States and abroad. We think of it not just as a memorial but also as part of Jack, himself, since it contains a part of him. Indeed, Jack's work was so important and still is so important that this book will probably be consulted as a reference by students and reactor scientists for years to come.

"I know, Norma, how proud you must be of Jack and his work. But just as those of us who worked with Jack are proud of that association and of participating in that

work with him, you should also have a feeling of achievement. For in you life with Jack you have also contributed to this work. So even though the book has Jack's name on it, I think it is your book, too, and have much satisfaction in giving you this volume."

After the brief ceremony, Mrs. Chernick was escorted into Jack's former office which has been converted into a library and reading room for use of the Reactor Theory Group. The first volume to be placed on the shelves of the new library was a copy of the memorial volume of selected papers.

The 188-page volume was financed by funds donated to the Jack Chernick Memorial Fund. 750 copies have been printed and will be distributed in the near future. Initially, the volume will be delivered to donors to the memorial fund. Those of the Brookhaven staff who still wish to contribute to the memorial fund may do so by sending a check to Mel Levine, Reactor Theory Group, Building 130, 32 Lewis. Other members of the Memorial Committee are: Alf Christoffersen, Glenn Price, and Paul Michaels.

Proposals Sought For Cooperative Research

The National Science Foundation, on behalf of the U.S.-Israeli Binational Science Foundation, is soliciting proposals for cooperative research projects of mutual interest to the United States and Israel in the natural sciences, agriculture, health sciences, science services, and special technologies.

Cooperative research is viewed by the Foundation as follows: joint research activities where interdependent projects of a single program are conducted in different laboratories and involve different sources of funding; provision of research facilities, materials, equipment, or services to cooperating scientists; interchange of personnel; joint planning or evaluation of research de-

sign and results; and exchange of research information.

Additional information regarding the preparation and submission of proposals is available at the Office of Scientific Personnel.

Wanted — Guys and Dolls For BNL Bowling Leagues

You don't have to be a pro; in fact, it doesn't matter if you've never bowled before — all our leagues are run on a handicap basis. If you'd like to bowl, but not every week, you can still join as a substitute. So don't hesitate, join up now and come down for a "fun" night. All it takes is a phone call to Jim Petro, extension 4421, to enter our bowling pool. See you on the Lanes.

Energy Conference



Dr. Charles Cicchetti, University of Wisconsin, presents a paper on the Trans-Alaska Pipeline to the Tuesday morning session of the BNL Summer Study on External Costs of Energy. The Study will conclude at the end of next week and a final report or summary of its work will be published after the close of the study.

US and USSR Exchange Concrete Polymer Data

An official US delegation, including Meyer Steinberg of DAS, visited the Soviet Union from June 30 through July 16, 1973. The purpose of the visit was to exchange scientific and technological information on "special cements and concrete polymer materials." This was one of a number of exchange visits arranged between the US and the USSR as a result of the agreements between Nixon and Brezhnev in 1972 and 1973.

The delegation included 3 cement manufacturing and concrete experts, and 2 concrete-polymer experts. They spent seven days in Moscow, two days in Leningrad, and two days in Volgograd and Mikailovka. The group was well received at a banquet in the forest on the banks of the Volga. At the banquet there was much toasting of the US and the USSR with vodka, cognac, and and caviar.

A highlight of the trip was a visit to Russia's largest cement plant, the Seabriakovskaya Cement Plant, which produces 3 million tons of cement each year. The Seabriakovskaya Plant is located in Mikailovka, 200 km northwest of Volgograd on the Volga River in the heart of Russia. The arrival of the US delegation marked the first American visit to this town, which has a population of 50,000 people and dates back to the 14th century.

Russia, who surpasses the US in cement production, currently has two laboratories working on concrete polymer. Architectural panels for the facing of apartment and office buildings in Moscow are being manufactured of polymer-impregnated concrete (PIC). The Russian delegation who visited BNL last May were shown work on application of polymer impregnating the concrete front walls of the Chemistry Building. This was the first large-scale surface impregnation using the techniques developed at BNL.

On the return trip several members of the group stopped at Rome where much work on PIC is in progress. There they visited Professor Rio of the University of Rome and Professor Nervi, the world-famous architectural concrete designer. The Italian group has designed and is constructing a 60-story high-rise building using reinforced PIC. In addition to the work now being done in the USSR and Italy, there are also other projects using PIC under investigation around the world.

New I.D. Cards Issued

All the regular employees are now being issued new I.D. cards. The newly designed card requires that employees have a new photograph taken in living color.

To expedite matters, the Personnel Office has a team of employees who, with their portable equipment, will set up in the various departments throughout the site.

So far they have covered Personnel, Photography & Graphic Arts, Biology, Machine Shop, and Staff Services. The team is currently operating in the AGS.



Marie Reynolds focuses the camera while Janice Olsen examines and laminates an identification card.

The system is painless! All they need from an employee is the old I.D. card and a smile. The employee receives his new laminated card on the spot within a few minutes.

George Sabine of Personnel is administering the program with the assistance of Marie Reynolds and Janice Olsen. Marie will be calling each department in the near future to make arrangements for employees to get new I.D.'s.

Selected Reading

Science 181, August 3, 1973
Systems for a technological information transfer. W.T. Knox. 415-19
Science and society: British group to be harbinger of dangers. N. Wade. 420-1
Congressman Les Aspin: Bee in the brass's bonnet. C. Holden. 424-5 +

Letters To The Editor

Dear Sir:
Thanks to *The Bulletin* we have located the purchaser of the unsigned money order. Thank you for your cooperation.
D. Zukowski, Mgr., Bankers Trust



The Russians gave the American delegation a tour of the largest cement plant in Russia. The woman on the right is a Russian chemical engineer in the plant; the man on the left is the party chief in the town; and the man next to him is the manager of the plant; the girl in the middle, Natasha Burlenko, was the official guide and interpreter for the USSR Ministry of Building Materials.

Arrivals & Departures	
Arrivals	
Barry G. Galen.....	Accelerator
Renee M. Tonini.....	Applied Math
Joseph R. Yelk.....	Instrumentation
Departure	
Arthur T. Meves.....	Purchasing

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On-Site Field Trip For YOC



Jack Sammis (left) works power machinery for a group of touring youths who are participants in the Youth On Campus Program this summer at Brookhaven. John Semkus (second from left) explains shop procedures to the group.



Helen Keeley, AGS, demonstrates switchboard procedure to YOC's Lita Field (left) and Linda Gray (right).



Randy Alford, Youth On Campus member, examines a vertical milling machine during a tour of Central Shops.

Contest Day Tests Unusual Skills

There was a challenge to meet at every turn last Friday, August 10, as children in BERA's morning program at the Recreation Hall raced, fanned and flipped their way through Contest Day. One never knew quite what to expect next after balancing a badminton racket on an index finger or fanning a balloon across the room.

One of the more difficult contests involved a series of tasks, culminating in the nearly impossible and totally messy instruction to eat three crackers and then try to whistle. Rich Parsons, in charge of this particular event, was showered with cracker crumbs as the contestants eagerly tried to be first to eek out the semblance of a whistle. He was as relieved as the winner when, at last, a feeble tweet sounded above all the sputtering and laughing.

The morning was filled with paper clips to be chained, chairs to be folded and unfolded, stunts to be performed, and bubbles to be blown. The grand finale offered a chance for winners and losers alike to profit. The heat of the summer sun was quickly remedied when contestants failed to catch their tossed water balloons. Teams of two children were each equipped with a wobbly, slippery, water-filled balloon, then instructed to toss it back and forth at designated intervals. The winning team ended up about fifteen feet apart before the cooling bomb splashed to the ground.

The events all completed, ribbons were awarded to the winners of each, and even the "losers" were presented with a balloon in recognition of their valiant efforts.

Practical Experiences

BNL's Youth On Campus Program, which is now in its sixth week, will be concluded on August 31. The 30 students in the program have recently visited the switchboard at the AGS, where they became acquainted with the techniques of paging through the assistance of Helen Keeley.

On August 8, Robert Lehn and his staff took the youngsters on an informative tour of the various machine shops. An explanation of the machines was accompanied by on-the-job demonstrations of plating, anodizing, welding, and the many other crafts performed in the shops.

Walter Milian and Walt Chornoma explained the workings of the carpenter shop this Tuesday. Demonstrations of routing, cabinet making, and the use of a sander that employs a 32 foot sandpaper belt were a few of the tour's interesting points. The Supervisors showed how the shop work related to the special needs of BNL's departments and walked the youngsters through an environmental trailer, which was currently being fitted with special cabinets to house its equipment.

The session finished with a tour of the sign, paint, and locksmith shops.

This week Office Practices sessions will feature the film, "Secretary: Normal Day."

Next Tuesday, August 21, M. Daconta of the U.S. Postal Service will speak at Berkner Hall.

Pool Pull A Drippy Success

Last Friday, August 10, BERA sponsored another drippy special for the children. Dozens of smiling faces appeared at the pool about 3 p.m. to participate in a Tug of War Contest.

In the shallow end of the pool, all those under eight years of age divided into two teams and, while in the water clutching the thick rope, tugged and pulled till one side was brought to the middle of the pool. After the successful victory for one side of the small-fry teams, sides were reversed and the other team was given a second chance to even up the score - and they did!

Meanwhile, throngs of older children divided into two teams and because there were so many of them, two lengths of rope were tied together and stretched diagonally across the five foot area of the pool. As soon as everyone's hands were securely wrapped around the rope, the contest began. The competition was a bit stiffer than in the smaller children's contest, and it took a bit longer, but finally after three matches, one side was victorious.

Last but not least, almost all the children participated in the Tug of War across the nine foot area of the pool. With uncountable number of kids on both side-decks and the long rope stretching across the pool, both teams battled to yank their opponents into the water. After what turned into a long, tiring endurance test, four members of one team ended up in the water, and the other team was declared victorious.

Don't forget today's special pool event at 3 p.m. - Cage Ball for the older children, and a Cup Race for those under eight.

Golf News

As the golf season comes down to the final weeks of competition a look at the standings show that all four divisions are being hotly contested for first place. The deadline for completion of league play and turning in of the score cards is noon on August 31. A tournament is tentatively scheduled for Spring Lake on August 28th with a rain date of August 30th. Further details will be posted on the golf bulletin board at the gymnasium.

The July tournament held at Riverhead shows Les Lawrence again coming up with a good round to win the event. Results of the tourney are: Low Gross - Les Lawrence (79), 2nd Low Gross - George Korhut (81). Low Net - Les Lawrence (67), 2nd - Peter Bond (71), 3rd - George Korhut (73), 4th - Mike Iarocci (74). Second Flight winner was Pat Swan with a Low Net of 71. Closest to the pin was won by Tom Iarocci and the longest drive by John Dioguardo.

Softball

Brookhaven League

In an extra inning ballgame, the Blue Jays defeated Metallurgy 12-11. The Blue Jays were down by 2 runs and tied the game in the sixth inning. Nick Pisco drove in the winning run in the ninth. Nick had a 4 for 5 evening, and "Doc" Carsten had a perfect night with a walk and 4 for 4 at bat.

National League

S&M continued to show a strong defense as they defeated EAO 19-1. Home runs were hit by Mars, Altrui and Gray.

In the other game played, the Six Pax defeated the Bio-Meds 11-5.

University League

In a very hard fought ballgame, the Gotchas won over the Odd Couples 13-12. With the Odd Couples ahead 12-10, the Gotchas scored 3 runs in the bottom of the seventh to win. George Morgan had a homerun for the Gotchas. The big slugger for the evening was Bob Brown of Odd Couples who was 4 for 4. Three of his runs, one a grand slam, and his fourth hit a triple.

In the other game of the evening the Oh-Kays, playing a good defensive game, defeated the Different Strokes 11-3.

Laboratory League

No scores reported to this reporter.

Phoubars 11 - Charley Browns 9

The Phoubars beat the Charley Browns by a score of 11 to 9. It was a good game and was decided in the last inning. Even the biggest sorehead on the Phoubars would have to admit that we were hanging on the ropes when the game ended.

The Phoubars didn't play their usual brilliant game but came through with a good team effort and a three-run homer by our pitcher J. Brennan in the top of the last inning won it. The game was won by the Phoubars in spite of the presence of an unknown person who played shortstop for the CB's. This individual had a "glove" and a rifle arm and we couldn't get him out all night. He wallopped a two-run homer in a late inning to come within one run of a tie. However, when he came up with two out in the bottom half of the last inning with a chance to tie up the game, we gave him an intentional walk. Phoubars are tricky too!

We requested to see his credentials and saliva tests, but "Himself" (F. Hohmann), the Manager of the CB's, refused our polite inquiries and insisted that the ringer unknown player is properly a member of the CB's "because he is a legitimate auditor." How would that grab you in the middle of a big game?

Our short fielder, Bob Brown of Meteorology, did not show up for this game. In last week's game against the Bubble Boys he speared one of J. Sondericker's blue-streak clothes-line specials with one hand. The glove and the ball were removed from his hand by surgery. You can call Bob "Lefty" from now on.

F. Hohmann outdid himself. He hit one out of infield - without a bounce. Fred would be a terrific home-run threat - if we played baseball in an elevator shaft. Barney ("The Great") Brehm was presented with a trophy by his team mates in grateful appreciation and acknowledgement of his many talents. Nobody else in the league can handle a long foul fly ball the way he does - debonair and classy, that's Barney.

Jeannie's Show On The Way Here Tickets On Sale!

The new sound of Nashville is on the way to Brookhaven and will arrive on the afternoon of Sunday, August 26. Jeannie C. Riley and the Homesteaders will bring their travelling show to the Green at the rear of Berkner Hall.

The outdoor show will start at 3 p.m. and last till 5 p.m. In addition to the Nashville show, pre-performance entertainment will be provided by the Dixyland band known as the Isotope Stompers.

The Jeannie Riley Show is now touring upper New York State and will travel on a private bus to BNL. She has been on a schedule of 19 consecutive one-nighters throughout New York, Maryland, and Ohio. This special bus contains the show props, the wardrobe, and an emergency sleeping quarter for use when the shows are too far apart to arrange for hotel or motel accommodations.



One of Jeannie's feature selections will be "Hush," which is making it big all over the music scene.

After BNL? Jeannie and her troupe load up in the bus again and this time head for Pennsylvania, Illinois, Wisconsin, and Michigan. To each place she brings a new sound . . . a replacement for the tired old cliches of hillbilly music that has been surpassed by the sound of a mix of New Orleans, Nashville, and Harlem, with a smattering of folk and Western to leaven the mix.

Buddy Lee Productions, the agency that handles most of the new talent that is the Nashville sound, reports that the Jeannie C. Riley show is one of their most popular bookings. "I have been amazed at the variety of audiences that have asked for repeat performances," they said. "College and community groups have been waiting on line to sign up Jeannie's show."

According to Lee, The Homesteaders have gone from a straight musical show to a variety act that is hard to beat. Jeannie is the star, of course, but the entire performance is so well integrated that the applause is really gratifying when the show is over!

Tickets are on sale to employees only until the middle of next week when they will be offered to the general public. The price has been set at a low \$3.00 for adults in order to bring the joy of Jeannie's Show to the largest number of people.

Tickets are available at the BERA film service office in the Cafeteria, they may also be purchased from Marge Stoeckel, Fiscal, 37 Brookhaven; Pat Towey, Physics, 20 Pennsylvania; and Audrey Blake, Research Library, 25 Brookhaven.

Touch Football Coming This Fall

A group of Brookhaven employees has shown interest in continuing the touch football league which was such a success last fall. However, in order to play, at least four teams must be formed.

The Slow Pokes and Circuits are ready to go, but others must now come forward. Further, a chairman must be selected to run this year's league.

If you are interested, please contact Jack Brennan at ext. 2485 no later than August 24. There is an entry fee of \$25.00 per team. Let's play football!!

Movie Tonight

Tonight the BERA Summer Film Festival presents *The Mad Room*, directed by Bernard Girard and produced by Norman Maurer.

The Mad Room is an exciting re-make of one of the screen’s greatest psychological thrillers, *Ladies in Retirement* (1941). Shelley Winters plays Mrs. Armstrong, a wealthy widow who lives with a young companion, Ellen Hardy (Stella Stevens) in a stately old mansion in Vancouver. Ellen persuades her employer to allow her teen-age brother and sister to move in with them. She does not tell Mrs. Armstrong that the youths have just been released from a mental hospital, in which they were confined as prime suspects in the brutal slaying of their parents.

When the siblings tell Ellen that they need a “mad room” - a place where they can go to let out their hostilities - Ellen secretly lets them use the attic study, which Mrs. Armstrong has kept locked since her husband’s death. The widow eventually discovers this, and demands that the youngsters leave. That night she is murdered, and a series of terrifying events begins.

Show time is 8:30 p.m. in Berkner Hall. Tickets are available at the door and are priced at \$1.00 for adults, and 50 cents for those under 18. Employees, families, friends, and the general public invited.

Next week’s presentation will be *Shoot Loud, Louder . . . I Don’t Understand*, an Italian comedy with English dialogue.

Tennis Clinic

An open letter of thanks to the organizers of the Tennis Clinic, John Elmore, Tom Koetzle, Alex Lumkin, and Larry Passell; and to their assistants, Dave Goosman and Dan Schaeffer:

We, the tennisly-speaking underdeveloped and infirm, who attended your four-week tennis clinic, wish to express to you our enormous appreciation and gratitude for the time and expertise you volunteered for our therapy on all those Saturday mornings. (We hope, come next summer, you won’t look unkindly upon 48 new challengers to your titles in the Lab tennis tournaments!)

The Future Champs

Classified Advertisements

Placement Notices

Each week, the BROOKHAVEN BULLETIN lists personnel placement requisitions currently being processed. The purpose of these listings is, first, to give notice of all non-scientific staff positions being filled and, second, to give employees an opportunity to request consideration for themselves; or others whom they wish to recommend to BNL. In filling vacancies, the Laboratory’s objective is to give first consideration to present employees, as follows: employees within the immediate group having the vacancy, employees within the department or division, employees within the Laboratory as a whole.

For further information regarding a placement notice, please contact Employment Supervisor, extension 2874 or 2882.

SECRETARIES - Part-time. Physics Department.

BIOLOGY ASSOCIATE - M.S. degree or equivalent experience in ecology with undergraduate degree in science. Biology Department.

INTERNAL AUDITOR - Bachelor’s degree or equivalent in business administration with accounting experience or training. AUI.

Autos & Auto Supplies

65 MUSTANG - V8, good mech, auto trans. \$400. Ext. 3421, 727-8631.

67 PLYMOUTH FURY III - 318 V8, auto trans, ps, air cond, h.d. shocks, trailer hitch, snows, A-1 cond. \$700. G.F. Buhl, 475-3149.

64 JEEP SEDAN - Blue, V8. \$1400 firm. 924-3449.

66 BUICK SPECIAL - 4 dr, 6 cyl, std shift, very good cond, best offer. Ext. 4708, 744-9436.

69 GMC PICKUP TRUCK - 6 cyl, w/removable alum camper, excel cond. \$2300. 732-8696, 8 am - 6 pm.

67 CHEVY - 2 dr, auto trans, excel cond. \$650. Baum, Ext. 4214/4207, 475-5543.

65 DODGE POLARA 9 PSGR WAGON - V8, ps/pb, auto trans, good running cond. \$150. John, Ext. 4143.

66 DODGE CORONET - Ps/pb, auto trans, 4 dr sedan, V8, good cond. \$450. Ben-Hur, 3395, after 5 Ext. 3020.

63 BMW MOTORCYCLE - R-69S, orig owner, 32,000 mi, Peel fairing. \$450. Nick, Ext. 3170, 744-0037.

70 KAWASAKI - 175 cc street & trail, fully equipped, immaculate. \$350. Rene, Ext. 4758, 744-5018.

63 WILLYS JEEP - 4 w/d, 6 cyl. Asking \$700. Ken, Ext. 3370, 325-1537 after 6.

72 PINTO - Auto trans, 3 dr runabout, 2000 cc, 11,000 mi, like new. \$1650. John, Ext. 4255, 929-4450.

65 BUICK SKYLARK - Ps/pb, r/h, auto trans, 2 dr, extra wheels, excel tires, good running. \$400. Saxon, Ext. 3435.

69 VW SQUAREBACK - 68,000 mi. \$900. Jones, Ext. 4581.

69 TRIUMPH SPITFIRE - New paint, just tuned, good cond, orig owner. \$700. 924-3963.

64 VW BEETLE - W/sunroof, new eng & 2 tires 1 mo old, good cond. \$400. Ext. 2915, 286-0866 after 6.

RADIAL TIRE - 175SR15 tubeless, fine tread but 1 casing plug, used as spare for years. \$5. Clive, Ext. 4237, 751-2697.

58 PONTIAC - Auto trans, excel cond. \$99. 281-2592.

65 PONTIAC LEMANS CONV - 6 cyl, easy on gas, good running cond, new brakes, front end alignment, & passed insp. \$250. C. Ruege, Ext. 4452.

67 VW SQUAREBACK - Rebuilt eng, new elec sys & brakes, r/h, tape deck. \$700. Mike, 473-7141.

4 TIRES - L78-15, 6 ply glass belted polyester, 4 ply polyester sidewall, great shape. \$100/all or \$30 ea. Chet, Ext. 3612.

69 CHEVY - 4 dr, gold, low mileage, new tires. \$1100. 732-1097.

72 FORD WAGON - Air cond, ps/pb, roof rack, trailer hitch & brake controller, excel cond, avail end of Aug. Remsberg, Ext. 4335, 286-9458.

65 MUSTANG - 289 V8, 3 spd manual trans, needs some work but still runs well, avail end of Aug. \$295. Remsberg, Ext. 4335, 286-9458.

69 PLYMOUTH BELVEDERE - 2 dr sedan, 6 cyl, auto trans, ps, excel cond. \$925. Bob, Ext. 3653.

Boats & Marine Supplies

21’ FINLANDER SEA SKIFF - Inboard, s/s radio, dual batts, compass, head, winter cover & all CG equip. \$1250. Ext. 2911.

17’ AMERICAN FINN - 75 hp Evinrude all elec, w/ Holsclaw trailer & extras. AN5-2231 after 7.

17’ PICNIC SAILBOAT - Fiberglass, trailer, 6 hp Johnson outboard, sleeps 4. \$1600. 231-8482, 368-8387.

2-15’ ALUM CANOES - Whitewater models w/extra ribs. Bergoffen, 286-8140.

18’ SCOTTIE CRAFT - Outboard cabin cruiser, fiberglass & wood construction, good cond. Asking \$175. Rene, Ext. 4758, 744-5018.

16’ GLASSPAR - 28 hp Evinrude, 1 owner, in water ready to go, will demonstrate, priced for quick sale. 298-8601.

19’ LYMAN RUNABOUT - 109 hp Gray Marine in-board, navy top, side curtains, cockpit cover, excel cond, in water, will demonstrate. \$1700. 878-0258.

21’ SLOOP - Gaff rig, FG over wood, compl equipped, 1971 Evinrude (4 hp). Ben, Ext. 2902.

15’ FIBERGLASS BOAT - 33 hp motor, Cox trailer. \$700. Wells, 878-4214.

15’ THOMPSON LAPSTRAKE RUNABOUT - In water, fiberglass bottom, w/35 hp Evinrude motor, Morse controls, will demonstrate. \$300. Nauman, Ext. 3381, 286-3764.

Miscellaneous

BELT MASSAGER - Sears multiple spd, new cond, w/2 belts & all instructions, twin post construction. \$45. G.F. Buhl, 744-2506.

GIRL’S CLOTHING - New cond, size 14 or 32. 924-8225.

FISHER - 220-T solid-state am/fm stereo rcvr, 55w, \$95; Garrard 50-MK II W/Shure M-75 cart, \$35; other items. George, Ext. 4210.

GIRL’S BICYCLE - 3 spd, 20” frame, 26” wheels, coaster brake, good cond. \$35. Levine, 473-2754.

TURNTABLE - BSR 610, \$35; Singer sewing machine, \$15; steam iron, \$5; bathrm scale, \$2. Ext. 3993, 286-0129.

BLONDE FROSTED HUMAN HAIR WIG - W/case, like new, try it on-you’ll love it. Orig cost \$150, sell \$40. Ext. 4622.

1971 COX TENT TRAILER - Perf cond, sleeps 6, table, storage, elec. Bill, Ext. 4641.

SHORT WAVE RCVR - Allied DX150, \$50; SSB linear 1KW w/pwr supply, metered, rack mounted, \$50; prop pitch motor w/XFMR & reverse relay, \$25. Bill, Ext. 4641.

PORTABLE HOME SAUNA BATH - Imported, like new, w/all access & instructions, easy to store away. \$45. G.F. Buhl, 744-2506.

GIRL’S 26” BICYCLE - 3 spd. \$20. Ext. 3030.

1 HP DEEP WELL PUMP - Perf cond, also tank, reason-got city water. \$75 takes both. R. DiLello, Ext. 2333.

WADERS - Chest high, fully vulcanized, excel cond. \$15. Pat, Ext. 3982.

SAW SHARPENING EQUIPMENT - Auto filer, auto retoother, auto setter, manual setter, Sharp-all grinder, extra grinding wheels, files, spare parts. Ted, Ext. 4661, LT9-2470.

LADY’S SUEDE COAT - Blue-tan-orange, size 10. Orig \$80, needs to be cleaned, will sell reasonably. Thearl, 286-1344.

SCOTTISH TWEED COAT - Size 14, worn once, Mac-Naughtons of Pitlochry, blue/brown/gray lg check. \$75. 286-8512.

PUPPIES - Free, 4 mo old, 2 males, 1 female, sm, blk, happy, partially trained. Higinbotham, 286-8968.

RIDING MOWER - 24” Sears, old but good. \$85. 588-5833.

55 & 29 GAL AQUARIUM - Stand, hood, rocks, gravel, filters, \$175; also HO tracks (used just to try), like new, over 30’, \$20. Ext. 3499.

FRIGIDAIRE REFRIG - Old, good working cond; Amer Tourister luggage (2), matching set; GE hairsetter, almost new. 286-0376.

TENT CAMPER - Alpine, sleeps 6, stove, sink, ice box, needs roof & some canvas work, handyman special. \$250. 286-8229 after 6.

RELOADER FOR 12-GAUGE SHOTGUN - B. Grant, 732-1976.

BLENDER - Folding clothes line; chairs; lg bulletin board; wig; bk shelves. 286-1493 eves.

BABY CARRIAGE - Like new, \$35; rocking horse, \$5; combo walker/rocking horse, \$5. 281-8695 Mon-Fri 8-12.

CASSETTE TAPE PLAYER & RECORDER - W/adapter & 11 tapes. George, Ext. 2547.

MAGNAVOX CONSOLE RECORD PLAYER - Twin spkrs. \$25. Pete, Ext. 3350.

UTIL TRAILER - Good tires, good cond, approx 4’x8’. \$50. Saxon, Ext. 3435.

17 CU FT REFRIG - Westinghouse frost-free, copper-tone; 24” range hood, white, w/fan & light. 757-0929.

BICYCLE - Girls’ or ladies’, 26”, wide tires, blue w/ chrome fenders & wheels, excel cond. \$30. Ext. 3601.

BANTAM CHICKENS - Varied sizes & colors, nominal prices. 286-0384.

GIRL’S BIKE - 20” Schwinn, green, good cond. \$20. Nancy, 878-2197.

2 DEVILBISS VAPORIZERS - Picnic table w/benches; 2 TV/FM antennas; infant walker/chair; expandable play area enclosure. R. Siemann, 924-4139.

COVERED WAGON TRUCK CAMPER - Self contained, sleeps 6, gas & elec refrig, 3 burner stove & oven. \$1000. Ext. 4280.

19” COLOR TV - Panasonic, 5 yrs old, table model, good picture. \$225. JU1-8412.

BEDRM SET - 3 pcs, dk pine, almost new. Chris, Ext. 2445 Mon-Thurs.

BED - 18th century dk mag, \$125; gossip table, dk mag, \$15; adj TV stand, dk mag, \$10. 475-1453.

PIANO - Sm upright, \$75; exec desk w/glass top, dk mag, \$175; formica dish cabinet, \$35; Kenmore wash machine, \$60. 475-1453.

MIRROR - Beveled, floor to ceiling, rope & carved wood trim, \$200; sect desk, dk mag, \$125. 475-1453.

AM/FM RADIO & PHONOGRAPH - Westinghouse console, walnut. \$30. Ext. 2915, 286-0866 after 6.

BICYCLE - Woman’s 26” fixed gear, needs a little work, otherwise sound, \$5; lawn sweeper, 30”, w/ catcher basket, pushing it sure beats raking, \$15. Clive, Ext. 4237, 751-2697.

12 GA SHOTGUNS - 30” hammerless dbl w/case, \$40; single shot hammer type, \$18; portable TV, 19” Westinghouse tube type b/w, \$25. Clive, Ext. 4237, 751-2697.

PWR LAWN MOWER - Sears Craftsman 18” gas reel type w/catcher basket, starts easily & runs great; brown tweed mod sofa, worn but serviceable, great for den, \$15. Clive, Ext. 4237, 751-2697.

BABY CAR SEAT - Carriage, port basinette; stroller; playpen; tricycle; toys. Bamberger, 289-3974.

PILOT - 2x50 w RMS, amp & Dynakit control amp, \$50; LWE spkrs, excel cond, \$90. Bamberger, Ext. 4847, 289-3974.

SONY TC127D - Stereo cassette deck, excel cond. \$100. Dave, Ext. 3396.

PORTABLE TV - Needs minor repair; old (78) phono-graph records. O. Booker, Ext. 4719.

SILEX JUICIT - Elec lemon, orange, grapefruit press, excel cond. \$6. L. Gallmann, Ext. 4889.

MOBILE HOME IN FLORIDA - 1972-72x12, 3 bedrms, 2 full baths, lived in 6 mos, unfurn. Sal, 878-2486.

ORLON YARN - Beautiful colors. \$2.50/lb, \$1.25/½ lb, will deliver to Lab or may be picked up at my home. Ann, Ext. 3163, 732-9384 after 6.

Real Estate

Real Estate advertised for sale or rent is available without regard for the race, color, creed or national origin of the applicant.

For Sale

E. PATCHOGUE - 5 bedrms, 3 baths, liv rm, din rm, fam rm w/stone fireplace, screen porch 2-car garage, swimming pool, extras. Asking \$58,000. 286-9015.

MIDDLE ISLAND - Custom built 2 story colonial, 3 bedrms, 2 baths, on 3 acres prop on 2 roads adjoining golf course, pond on property, Bartlett Rd. Ext. 4268.

MASTIC BEACH - 1 bedrm, w/w, elec heat, paneled throughout, s/s, 60x100 plus 60x100 building plot, perf retirement or starter house. 281-7663, 281-8894.

BELLPORT-E. PATCHOGUE - 65’ “L” shaped ranch, 3 bedrms, harvest rm, 2 baths, full bsmt, garage, assume 6% mort. 286-1056.

For Rent

BELLPORT - Waterfront, landscaped, privacy, beach deck & dock, fully furn & equipped, liv, din, 4 bed-rms, study, kitchen w/new washer, drier, dishwasher & 2-oven stove, avail 9/15-6/15. \$375/mo. 286-8744, 286-1017.

YAPHANK - 2 bedrm house, att breezeway & garage, fireplace, ceramic bath, located 10 min from Lab. Ext. 2881, 924-3919 after 5:30.

2½ RM STUDIO APT - Pt Jeff Sta in convenient loca-tion. \$166/mo, Sept-May. 941-4581.

2½ RM APT - Priv entrance, util incl. Ext. 2311.

BELLPORT VILLAGE - Lg furn house on lg lot, 4 or 5 bedrms, 2½ baths, all new kitchen, lg playrm, beach privileges, avail for 1 yr beginning 9/1. \$400/mo. Remsberg, Ext. 4335, 286-9458.

Wanted

PERSON TO CLEAN HOUSE - Biweekly, references required. Ext. 4337, 924-5294 after 6.

LEAD GUITAR - To play & sing in hard rock band. Ray, 878-2486.

SEWING MACHINE - Lgt wt portable in good cond, prefer Singer or Kenmore. R. Hyland, 878-0079.

EXCHANGE - Mod formica & metal dinette set, 6 chairs, 1 leaf; for colonial set, wooden, 4-6 chairs & leaf. 286-0376.

FREEZER - Used upright, \$50-\$75. Bennett, 878-1790.

TO RENT OR BUY (CHEAP) - Transceiver w/channel 5 or 7 crystals installed. Ext. 4109.

PICNIC TABLE & BENCHES - Round or rectangular, redwood preferred, reasonable cond & price. Wells, 878-4214.

4 PORCH POSTS - “Colonial Style” turned, approx 8’ long, reasonable, will pick up. 878-2172.

HOMES - For 2 male yellow & white kittens, free, ready 8/23. Nauman, Ext. 3381, 286-3764.

GOOD HOME - For extremely gentle & affectionate male cat, leaving country - can’t take. Ben-Hur, Ext. 3020.

BOY’S BICYCLE - Good cond, 24” preferred. 286-3742.

BABYSITTER - Working mother needs babysitter for sm children, reasonable rate, Riverhead area. Ruth, Ext. 4106.

2 HP OUTBOARD MOTOR - Late model. G. Kinne, Ext. 3334.

Carpools

VACANCY - Long-established carpool from E. Queens has vacancy. K. Fuchel, Ext. 4116/4106.

5TH DRIVER NEEDED - For on-time carpool from Bay-port. Jerry, Ext. 3434.

Lost & Found

MISSING - 2 cots, alum frame, green canvas, name written on edge, last seen at AGS, loser terminating. Ext. 3412.

FOUND - Toyota ignition key. Ext. 3120.

Services

GARAGE SALE - Aug 18 & 19, Bartlett Rd, Middle Island. 924-8225.

TREE REMOVAL & CHAIN SAW WORK - Also light hauling, free estimates. Ken, 289-8212 eves.

GREAT BKS - Organizing fall course on fiction, topics varied. Roberta, 286-1528.

DOG TRAINING CLASSES - Expert instruction in basic obedience & behavior, begin 9/7 at 7 pm. P. Warner, Ext. 4791, 727-1218 days.

TRUCKING & HAULING - \$10/truckload. Paul, 744-3807.

FISHERMEN - Do you want your catch smoked? Gerd, 744-9411 after 5:30.

GARAGE SALE - Sat Aug 18, 9-5, household, tools, & misc equipment; 31 Southern Blvd, E. Patchogue. Ron, 289-1003.

YARD SALE - Misc items; corner of Woodville Rd & Suffolk Down, Shoreham; Sat 8/25, 10-4.

EMERGENCY PHONE NUMBERS

Medical 2222

Fire 3333

Police 4444

Classified Ad Policy

Deadline is 12 noon Monday for publication Friday of the same week.

1. The Brookhaven Bulletin's classified section may be used only by active and retired Laboratory employees.

2. All items for sale or rent must be the advertiser's property.

3. Ads for material acquired for resale in association with a full or part-time business cannot be accepted.

4. Firearms offered for sale or trade may not be brought on site.

5. Ads not carried because of space restrictions will be held for publication in the next issue.

6. Ads are run only once and must be resubmitted if they are to be repeated.

7. Ads should be restricted to 20 words or less and typed or printed on the form provided, and must bear the employees signature.

☐ For Sale: Auto & Auto Supplies

☐ For Sale: Boats & Marine Supplies

☐ For Sale: Miscellaneous

☐ Wanted

☐ Carpools

☐ Lost & Found

☐ Services

Check ☒ the heading applying to your ad.
Print or type your ad in 20 words or less.

Ads concerning property for sale or rent cannot be accepted on this form. Special Real Estate Ad forms are available at the Office of the Brookhaven Bulletin, Room 111, 40 Brookhaven Avenue.

Employee's Signature.....

Life No.

Ext.

Send to: Brookhaven Bulletin, 40 Brookhaven Avenue (Ext. 2345).